

What is claimed is:

1. A backplate of a Plasma Display Panel (PDP), comprising:
a lubricant thin film layer formed on a front surface of the backplate having
5 barrier ribs; and
a phosphor material layer formed on the lubricant thin film layer.
2. The substrate of claim 1, wherein a material of said lubricant thin
film is selected at least one from the group comprising DLN (diamond-like Nano-
10 composite), DLC(diamond-like Carbon), MoS₂, and Teflon.
3. The substrate of claim 2, wherein said DLN includes one of W, Hf,
Zr, Al, and Nb.
- 15 4. The substrate of claim 1, wherein a material of the lubricant thin
film has a friction coefficient of below 0.06.
5. The substrate of claim 1, wherein a material of the lubricant
material has a refractive index of above 2.0.
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- 20 6. A backplate fabrication method for a PDP, comprising:
a step for coating a lubricant thin film on a substrate having barrier ribs,
and forming a lubricant thin film; and
a step for forming a phosphor material on the lubricant thin film.

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7. The method of claim 6, further comprising a heat treatment step for removing a certain stress of the lubricant thin film and removing an inert gas contained in the lubricant thin film.

5 8. The method of claim 6, wherein in said lubricant thin film formation step, the lubricant thin film is formed at a thickness of 1000~10000 μ m based on one process of a high frequency cosputtering (RF-cosputtering) method, an evaporation, and an IBCD method.

10 9. The method of claim 6, wherein said phosphor material coating step includes the steps of:

aligning a screen mask at a certain position of the backplate; and

selecting one of red, green and blue phosphor materials and printing the selected one on the aligned screen mask and then drying the same,

15 whereby the red, green and blue phosphor materials are coated at a corresponding region of the backplate by repeatedly performing the above-described steps.

20 10. The method of claim 6, wherein said phosphor material coating method includes the steps of:

printing/drying/light-exposing/developing the red or green or blue phosphor material;

sand-blasting in a state that the red, green and blue phosphor materials are filled at a certain region; and

25 molding the sand-blasted backplate.

11. A backplate fabrication method for a PDP, comprising the steps of:
coating a photosensitive phosphor material on a front surface of a
backplate having barrier ribs;

5 spraying a compression gas so that the photosensitive phosphor material
is uniformly coated on a bottom portion of the backplate in which the barrier ribs
are formed; and

light-exposing/developing and drying a region where the phosphor
material is coated.

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12. The method of claim 11, further comprising a step for molding a
backplate in which the photosensitive phosphor materials are uniformly coated.

13. The method of claim 11, wherein in said phosphor material coating
15 step, a photosensitive phosphor material having a density of below 40000cps is
coated.

14. The method of claim 11, wherein in said phosphor material coating
step, the photosensitive phosphor material is coated using a squeeze which is
20 operated at an angle of above 60°C at a scan speed of below 20cm/min for
thereby performing a desired coating operation.

15. The method of claim 11, wherein in said compression gas
spraying step, the spraying operation is implemented by an inert gas based on a
25 pressure of below 2kg/cm².

16. The method of claim 11, wherein in said compression gas spraying step, the spraying operation is performed by a nitrogen gas.

5 17. The method of claim 11, wherein the height of the barrier rib is above 500 μ m.

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